Section 210.7
Dunes

A. Definitions

1. Dunes are elevated accumulations of sand formed by wind action. Dunes which are undisturbed appear as hills, mounds, or ridges of sand and are typically vegetated with beach grass and shrubs. The more or less continuous ridge of dunes parallel to, and just inland of, the beach is termed the 'foredune zone'.

For management purposes the seaward limit of the foredune zone is defined as: (1) the furthest seaward point where a noticeable sustained increase in topographic slope begins, or (2) the furthest seaward extent of rooted vegetation in the immediate area, or (3) fifteen (15) feet seaward of the dune crest, whichever is further seaward. The inland edge of the foredune zone is defined as twenty-five feet (25) landward of the dune crest. It is from the inland edge of the foredune zone that all setbacks and coastal buffer zones are applied.

B. Findings

1. The foredune zone, like beaches, is a dynamic feature. While beaches are shaped by the forces of waves, the foredune is created and shaped primarily by the wind. The foredune zone dissipates energy from waves and storm-surge overwash. This results in a decreased wave run-up and lowered levels of overwash water. Thus the foredune zone serves as buffer to help minimize property loss. As reservoirs of sand, the foredune zone provides some sediment to severely eroding beaches. The height and stability of foredunes is enhanced by the growth of beach grass which traps and anchors windblown sand. Although resistant to salt air and desiccation, beach grass is easily killed by human foot traffic. The shape or form of the foredune zone is of paramount importance. The seaward-facing slope of the foredune (termed the dune ramp) naturally forms at the same gradient as the seaward slope of the berm (usually 5-10 degrees). This low-gradient surface serves to dissipate and absorb wave energy. Higher-gradient slopes on human-altered foredunes often do not absorb the wave energy; the non-absorbed waves erode the foredune and are reflected seaward, transporting sand offshore.

2. Human-altered foredunes constructed of sand-sized material able to be moved by the wind will move and grow similar to natural foredunes.

3. Human-altered forms constructed in the foredune area of gravel-sized material not moveable by the wind are not dunes, but are defined as dikes. Dikes are often placed along the shoreline by property owners in the hope that they will function as foredunes. However, dikes should not be confused with a true foredune because their response to geologic processes is quite different.

4. In order to protect the ecological and geological integrity of the foredune zone and enhance its ability to serve as a buffer during moderate and severe storm events all residential construction should be setback not less than 30 times the annual erosion rate and all commercial construction should be set back not less than 60 times the annual erosion rate as previously established in Section 140 of this program. Larger setbacks may be required based on an assessment of the site conditions and other concerns relative to the proposed project. However, in no case should the dune setback be less than 50 feet. Setbacks help protect property from damage and destruction during severe storm events. All dune setbacks should be measured from the inland edge of the dune or dike. Access ways may be allowed over the dunes in order to facilitate pedestrian access to the beach.

5. Individual Sewage Disposal Systems have the potential to become buoyant or be damaged during a severe storm event causing raw sewage to spill onto the beach. Therefore, no new Individual Sewage Disposal Systems should be constructed within the setback area. Repairs should, whenever possible, be located outside of the setback area.

C. Policies

1. The Council's goals are to: (a) protect the foredune zone from activities that have a potential to increase wind or wave erosion; (b) to prevent construction in high hazard areas and protect the public from dangerous storm forces; (c) to enhance the ability of dunes to serve as a natural storm buffer; and, (d) to protect the scenic and ecologic value of the foredune zone and dunes.

2. All residential construction shall be setback not less than 30 times the annual erosion rate and commercial construction shall be setback not less than 60 times the annual erosion rate. In no case shall the dune setbacks be less than 50 feet. All dune setbacks shall be measured from the landward edge of the foredune zone defined to be 25 feet landward of the dune crest. A special exception shall be required for relief from the 50 foot setback requirements from dunes and beaches unless the activity proposed is a beach facility or walkover structure in which case a variance from the dune setback provisions shall be required. A variance shall be require for relief from the setback requirements from dunes and beaches on barriers for the area that lies between the 50 foot minimum setback and nay greater setback based on the annual erosion rate. No new Individual Sewage Disposal Systems shall be constructed within the 50 foot setback area from the dune or beaches or seaward of construction lines (see Section 300.6.A.2 for definition of new ISDS). Walkover structures may be permitted over the dunes in order to gain access to the beach.

3. Alteration of the foredune zone adjacent to Type 1 and 2 waters is prohibited except where the primary purpose of the project is non-structural protection, restoration, nourishment, or improvement of the feature as a natural habitat for native plants and wildlife. In no case shall structural shoreline protection facilities be used to preserve or enhance these areas as a natural habitat or to protect the shoreline feature. The Council may also permit the establishment of accessways (e.g., dune walkover structures) on foredunes provided that all requirements of this section are met.

4. Alteration of the foredune adjacent to Type 3, 4, 5, and 6 waters may be permitted if (a) the alteration is undertaken to accommodate a designated priority use for the abutting water area; (b) the applicant has examined all reasonable alternatives and the Council has determined that the selected alternative is the most reasonable; (c) only the minimum alteration necessary to support the designated priority use is made; (d) there is no change in the usage of the property; (e) there is no change in the footprint of existing structures; and, (f) the construction will meet all current and applicable policies, standards, and requirements of the RICRMP.

5. The construction of dune walkover structures may be permitted in order to limit pedestrian traffic and disturbance of the foredune zone. The width of dune walkover structures shall be limited to four (4) feet. In some instances, walkover structures may include small decks and viewing platforms provided that the square footage of the viewing platforms will be limited to 100 square feet.

D. Prohibitions

1. Vehicles are prohibited on dunes and within 75 feet of the dune crest except on trails marked expressly for vehicular use. Prohibited areas may or may not be vegetated.

2. Alteration of the foredune zone adjacent to Type 1 and 2 waters is prohibited except where the primary purpose of the project is non-structural protection, restoration, nourishment, or improvement of the feature as a natural habitat for native plants and wildlife. In no case shall structural shoreline protection facilities be used to preserve or enhance these areas as a natural habitat or to protect the shoreline feature.

3. No new Individual Sewage Disposal Systems shall be constructed within the 50 foot setback area from the dune or beaches or seaward of construction lines (see Section 300.6.A.2 for definition of new ISDS).